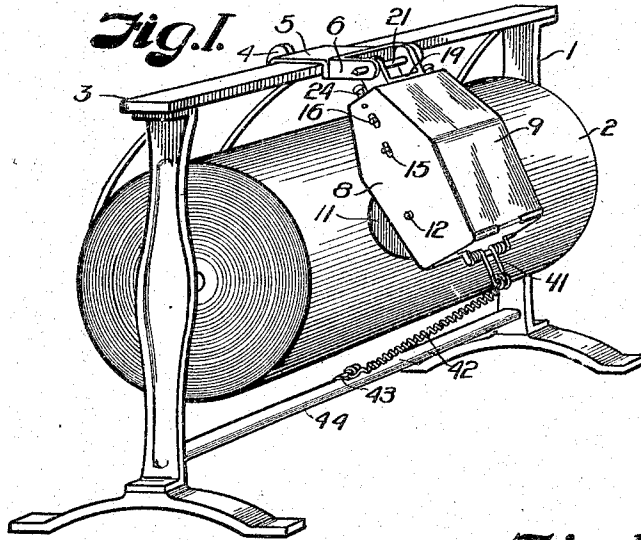
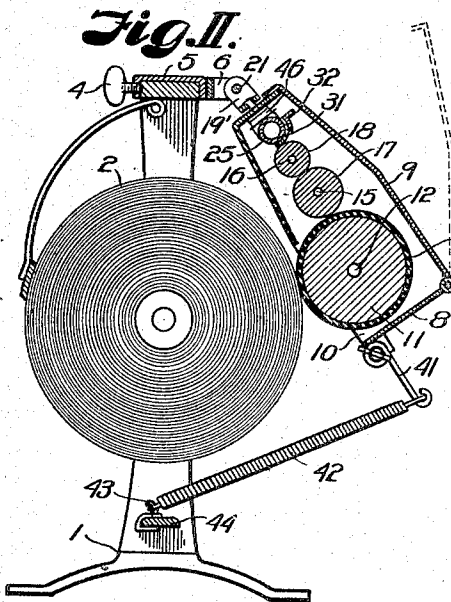
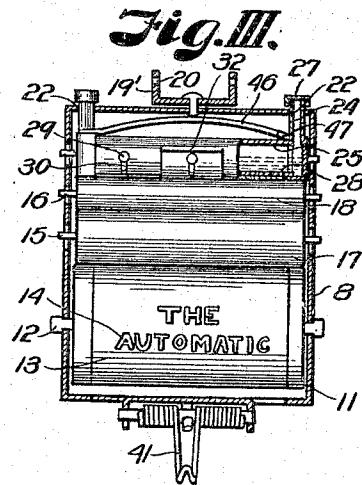
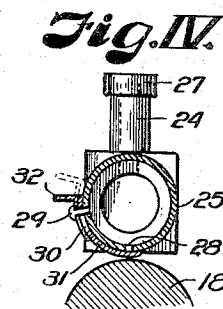


I. W. KING.
ROLL PRINTING DEVICE.
APPLICATION FILED SEPT. 30, 1915.

1,229,476.

Patented June 12, 1917.



WITNESSES:

Lynn A. Robinson.
Leta E. Coats.

INVENTOR

Isaac W. King
BY
Arthur C. Brown
ATTORNEY

UNITED STATES PATENT OFFICE.

ISAAC W. KING, OF KANSAS CITY, MISSOURI, ASSIGNOR TO THE AUTOMATIC ADVERTISING & SALES COMPANY, OF KANSAS CITY, MISSOURI, A CORPORATION OF MISSOURI.

ROLL-PRINTING DEVICE.

1,229,476.

Specification of Letters Patent. Patented June 12, 1917.

Application filed September 30, 1915. Serial No. 53,397.

To all whom it may concern:

Be it known that I, ISAAC W. KING, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Roll-Printing Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a roll printing device, and more particularly to a device for printing on rolled wrapping paper as the paper is withdrawn from the roll; the principal object of the present invention being to provide improved means for supplying ink to the printing roller and for yieldingly retaining the printing roller in contact with roll upon which the impression is made.

In accomplishing this object I have provided the details of structure hereinafter described and illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of my improved printing device illustrating its application to a roll of wrapping paper.

Fig. II is a central vertical section of the same.

Fig. III is an enlarged detail view of the printing device, a part of the ink container being broken away for better illustration.

Fig. IV is an enlarged cross section of the ink container and one of the inking rollers.

Referring more in detail to the parts:—

1 designates a roll paper stand and 2 a roll of wrapping paper that is mounted in the stand in the ordinary manner.

Fixed on the top rail 3 of the stand 1, preferably by means of a set screw 4, is a bracket 5 having arms 6 projecting laterally from the stand in position for carrying the roll printing device hereinafter described.

The printing device proper comprises a housing 8 having a hinged cover 9 for exposing the printing rollers and container, and having an opening 10, in its under side, through which the printing roller 11 is projected; the said roller 11 being fixed on a shaft 12, which is revolubly mounted in the sides of the housing 8 and provided with a rubber or like facing 13 bearing the type 14

whereby the printing is effected when the type contacts the roll of paper.

Also revolubly mounted in the sides of the housing, are rods 15 and 16, which bear the inking rollers 17 and 18 respectively; the said rollers having peripheral contact and being of different diameters in order to properly transfer ink from one to the other, and the said roller 18 being in peripheral contact with the type facing on the printing roller 11 so that ink applied to the first in train will eventually be transferred to the type facing and thence to the paper roll.

Pivottally mounted on the inner end of the housing 8 is a yoke 19 comprising lugs 19' having apertures 20 through which a pin 21 that is mounted in the bracket ears 6 is projected in order to pivotally mount the housing on the bracket, and located in the end of the housing, on opposite sides of the yoke, are apertures 22 through which the feed tubes 24 of an ink container 25 are projected; the said tubes being provided with closing caps 27 whereby ink is confined within the container to prevent it from splashing when the housing 8 is agitated, and also to exclude air from the container and obviate evaporation or drying of the ink.

The container 25 is provided, at a point adjacent the roller 17, with feed ports 28, and slidably mounted on the container, by pin and slot connection 29—30, is a shell segment 31, which is adapted for covering and uncovering the container ports, when the ink is to be fed or cut off from the contacting inking roller; the segment being provided with a lip 32 whereby it may be moved. The segment fits closely against the container, so that it is frictionally held in fixed position.

Mounted on the free end of the housing 8 and projecting therefrom, is a spring arm 41 and mounted on the end of said arm is a contractile spring 42, which is weaker than the spring arm 41 and has its other end attached to a hook 43 on a cross bar 44 on the roll stand 1 so that the housing is yieldingly tensioned toward the roll of wrapping paper and the printing roll is held in contact therewith, so that as wrapping paper is removed from the roll, the withdrawal of the paper causes the printing roll to rotate and produce an impression from the type face on the wrapping paper.

The container 25 is yieldingly urged to-

ward the roller 17 by a flat spring 46 which is bowed at the middle so that it contacts the end of the housing, and is slit at the ends to provide the forks 47 that lie on opposite
 5 sides of the standards 24; the force of the spring causing the segment 27 to contact the roller 17 and push the latter against the roller 18 and the latter against the type roller, to insure close contact of the parts
 10 and proper inking of the type.

In using the device, presuming the parts to be assembled as described, ink is supplied to the container through the filling tubes, and the feeding ports in the con-
 15 tainer opened by shifting the segment, so that ink from the container will pass through the ports onto the first inking roll, from which it is transferred to the succeeding roll and eventually to the type facing on the printing roll.

When the rolls have been properly inked, the feeding ports are closed by turning the segment 27 so that it will overlie the ports. With the printing roll properly inked and
 25 the spring 42 connected with the frame 1, the inking roll is held in yielding contact with roll of wrapping paper so that the printing is effected, as heretofore described.

When the supply of ink has been exhausted from the rollers, the lid of the hous-
 30 ing 8 is lifted and the container ports again brought into registration to furnish a new supply, or when the supply of ink has been exhausted from the container, the caps from
 35 one or both of the feeding tubes may be removed and a fresh supply placed in the container.

It is apparent that, with an ink container of the character described, the supply to the
 40 rollers may be regulated to secure a clear and unblurred impression on the wrapping paper, and that the flat spring will retain the inking roll in contact with the roll of wrapping paper, and that the tension on the

paper roll may be substantially constant, as
 45 when the roll is new the housing is spaced some distance from the axis and both springs are under tension, whereas as the diameter of the paper roll decreases, the
 50 tension on the heavier spring 41 is first reduced and then eliminated so that the entire tension is produced by the secondary spring 42.

It is also apparent that, by reason of the swivel mounting of the housing, the print-
 55 ing roll may have universal movement on the wrapping paper to insure effective printing.

Having thus described my invention, what I claim as new therein, and desire to secure
 60 by Letters-Patent, is:—

1. The combination with a suitable stand, of a housing pivotally mounted on said stand, a printing roller carried by and projected from the housing, and a plurality of
 65 spring members of relative different strength connecting the housing with the frame, whereby one of the springs may act as a relay to the other in effecting substantially constant pressure of a printing roller
 70 on a body carried in the frame when said body is varied in diameter substantially as set forth.

2. The combination with a roll paper frame, of a housing pivotally mounted on
 75 said frame, a printing roller rotatably mounted in the housing and projecting therefrom to contact a roll carried in the frame, a spring attached to the housing, and
 80 a spring attached to the frame and connected with the housing spring, the said springs being of relative different strength whereby a substantially even tension of the printing
 85 roller against the roll held in the frame may be maintained as the diameter of the frame roll diminishes.

In testimony whereof I affix my signature.
 ISAAC W. KING.